

WHAT IS CLAIMED IS:

1. A method for monitoring performance of a transactional server as seen by end-users of the transactional server, the method comprising:

5 executing a transaction between an agent running on a client computer at a remote end-user location and a transactional server, wherein the transaction includes a sequence of uniform resource locator (URL) requests transmitted from the agent to the transactional server over a network;

 measuring time durations between predefined events that occur during execution of the transaction, the measurements being made by the agent; and
10 using the measured time durations, displaying a break down of time involved in completion of the transaction into multiple components, including at least a network time and a server time.

2. The method of Claim 1, wherein measuring time durations between predefined events includes measuring a domain name system (DNS) lookup time.

15 3. The method of Claim 1, wherein measuring time durations between predefined events includes measuring a time required to establish an initial connection between the agent and the transactional server.

 4. The method of Claim 1, wherein measuring time durations between predefined events includes measuring a time duration between the agent sending a first uniform resource locator (URL) request and receiving an acknowledgement from the transactional server for the first URL request.
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 5. The method of Claim 1, wherein measuring time durations between predefined events includes measuring a time duration between the agent receiving an acknowledgement from the transactional server for the first URL request of the transaction and the agent receiving a first buffer of data.
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 6. The method of Claim 1, wherein measuring time durations between predefined events includes measuring a time duration between the agent receiving a first buffer of data from the transactional server and the agent receiving a last buffer of data from the transactional server.

7. The method of Claim 1, wherein measuring time durations between predefined events includes measuring a time spent by the agent processing the transaction on the client.

8. The method of Claim 1, wherein displaying a break down of time includes displaying an amount of time spent in resolving a domain name for the transactional server into an internet protocol address for the transactional server.

9. The method of Claim 1, wherein displaying a break down of time includes displaying an amount of time spent in establishing an initial connection between the client computer and the transactional server.

10. The method of Claim 1, wherein displaying a break down of time includes displaying an amount of time spent by the agent processing a transaction on the client computer.

11. The method of Claim 1, wherein displaying a break down of time includes displaying at least one of the following: a DNS resolution time, a connection time, a client time, and a server/network overlap time.

12. The method of Claim 1, further comprising:

executing the transaction from each of a plurality of geographically distributed locations; and

displaying a break down of at least network time and server time for the transaction from each of the plurality of locations, whereby an administrative user of the transactional server may compare the network and server times for the transaction as seen by end users in each of the plurality of locations.

13. A system for monitoring performance of a transactional server as seen from an end user location, the system comprising:

an agent component that communicates with the transactional server over a network to execute a transaction, and measures time periods between predefined events that occur during execution of the transaction; and

a report generation component that generates a transaction breakdown display based on the time periods measured by the agent component, the transaction breakdown display indicating a breakdown of a total transaction response time into multiple components.

14. The system of Claim 13, wherein the multiple components include a network time and a server time.
15. The system of Claim 14, wherein the multiple components further include a client time.
- 5 16. The system of Claim 15, wherein the multiple components further include a connection time and a DNS resolution time.
17. The system of Claim 15, wherein the multiple components further include a server/network overlap time.
- 10 18. The system of Claim 13, wherein the transaction comprises multiple uniform resource locator requests.
19. The system of Claim 13, wherein the agent measures a time taken to establish an initial connection with the transactional server.
20. The system of Claim 13, wherein the agent measures a time duration between the agent sending a first uniform resource locator (URL) request and receiving an acknowledgement from the transactional server for the first URL request.
- 15 21. The system of Claim 13, wherein the agent measures a time duration between the agent receiving an acknowledgement from the transactional server for a first uniform resource locator (URL) request of the transaction and the agent receiving a first buffer of data.
- 20 22. The system of Claim 13, wherein the agent measures a time duration between the agent receiving a first buffer of data from the transactional server and the agent receiving a last buffer of data from the transactional server.
23. The system of Claim 13, wherein the agent measures a time spent by the agent processing the transaction on the client.
- 25 24. The system of Claim 13, further comprising a component that analyzes data collected by the agent component to identify correlations in time between degradations in transaction response times and degradations in the components of such transaction response times, to thereby facilitate identification of causes of end user performance problems.

25. A method for monitoring performance of a server system, the method comprising:

receiving data from a plurality of computers in a plurality of geographic locations indicating time spent by a server in processing transaction requests from each of the plurality of computers;

receiving data from the plurality of computers indicating time spent by a network in processing the transaction requests; and

generating a report page with graphical representations of the time spent by the server and the time spent by the network for each of the plurality of geographic locations to facilitate a determination of whether network and server delays are location dependent.

26. The method of Claim 25, further comprising receiving data from the plurality of computers indicative of, and displaying representations of, at least one of the following: client time, DNS resolution time, connection time, and server/network overlap time.

27. A method of monitoring performance of a transactional server as seen from a remote user location, the method comprising:

executing a transaction between a client computer in the remote user location and the transactional server, wherein the transaction comprises a sequence of URL requests passed from the client computer to the transactional server over a computer network;

on the client computer, measuring time durations between predefined events that occur during execution of the transaction; and

based on the time durations as measured by the client computer, breaking down a total execution time of the transaction into multiple components, including at least a network time and a server time.